THE RELATIONSHIP OF RESILIENCE, SOCIAL SUPPORT, AND COMBAT HISTORY TO WELL-BEING IN STUDENT MILITARY VETERANS

BY

CHRISTOPHER P. REA, M.S.

Submitted to the graduate degree program in Counseling Psychology and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

_____
Chairperson Barbara Kerr, Ph.D.

_____
Karen Multon, Ph.D.

_____
Changming Duan, Ph.D.

_____
Kristen Hensley, Ph.D.

_____
Mary Fry, Ph.D.

Date Defended: December 11th, 2015

The Dissertation Committee for Christopher P. Rea

certifies that this is the approved version of the following dissertation:

THE RELATIONSHIP OF RESILIENCE, SOCIAL SUPPORT, AND COMBAT HISTORY TO WELL-BEING IN STUDENT MILITARY VETERANS

_____

Chairperson Barbara Kerr, Ph.D.

Date approved: December 11th, 2015

ABSTRACT

Most research on veterans focuses on negative outcomes, but little is known about positive outcomes for veterans. The proposed study's purpose was to examine the relationship of combat history, resilience, and social support to the well-being of a sample of military veterans who have served in Iraq or Afghanistan and who have successfully transitioned into college. A multiple regression examined the data to determine how much unique variance each factor contributed to well-being. It was found that the amount of combat history did not predict well-being. Resilience and social support predicted well-being of college student veterans.

Key words: Well-being, Iraq, Afghanistan, combat, students, veterans

ACKNOWLEDGMENTS

I would like to thank my dissertation committee members for their support, encouragement, and feedback through the process of completing this study. The assistance I received from each of you was invaluable, and I offer you a sincere and heartfelt thank you for your time, energy, and wisdom. I would especially like to thank Dr. Barbara Kerr for serving as my mentor and doctoral advisor.

I would also like to thank my wife Amber and our daughter Bailey. The two of you helped me stay positive and focused through the ups and downs associated with completing a dissertation study. Although there were times where I had to sacrifice spending a great deal of time with the two of you to complete my dissertation, you were always my biggest supporters and source of encouragement. You offered many smiles, hugs, and words of encouragement that gave me the drive to complete this study. The two of you made many sacrifices throughout this process, and I cannot verbalize the appreciation and love I have for you both. Without your unfailing love and support this study would not have been possible.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

Introduction

Military duty often involves service members placing their life in great risk to accomplish the mission. Often, these missions are conducted in countries far from the home of service members where hostile people and environments are considered the norm. In recent years, there has been a high pace of military deployments to Iraq and Afghanistan with many service members serving more than one tour of duty in a combat zone. Generally, the service member is placed on orders for the tour of duty and must complete the tour assigned regardless of personal concerns or circumstances. There are very few scenarios in which a member of any branch of service will be dismissed once ordered to a tour of duty. Further, the length of each deployment a service member experiences may vary in time from a shorter four to six month tour to a single tour as long as 18 months served in a combat zone. The length of the tour will dictate how long the service member will be away from home, friends, and family while also in part determining the likelihood of having combat related experiences. In addition to the rapid rate of deployment that many service members experience, there is often a short "dwell time" between deployments where the service member is home between tours of duty. Dwell time can be as brief as six months or less or a year or longer. The M.O.S. (Military Occupational Specialty) or job of the service member in part determines the frequency of deployment. During the period of dwell time the service member is either serving on active duty stateside or back on reserve status if the service member is in the National Guard or Reserves.

As with many groups, the military is a close community of people who can understand the unique stressors that service members and their families endure (Demers, 2011). Even if service members have had different experiences than one another, they can still relate to many of

the same stressors such as leaving friends and family for long periods of time. Spending long periods of time away from home and family in often violent and dangerous parts of the world can be very stressful for service members (MacGregor, Han, Dougherty, & Galarneau, 2012) who may then try to find others who have had similar experiences that they can relate to (Greenberg, Langston, & Gould, 2007). In this way, the military consists of its own cultural norms including an attitude of toughness or "suck it up," and "drive on" attitude (Greenberg et al., 2007). This is often called "hardiness" and is related to masculine norms (Alfred, Hammer, & Good, 2014). Alfred et al., point out, however, that what is good for the individual in combat may not be good after combat in ordinary life. Upon return home from a combat zone deployment, each service member must determine effective ways of interacting with others as a part of the transition process. Some service members will continue to interact with military personnel on a regular basis such as those who serve on active duty upon returning home. Others will reintegrate into the community and world of work if they are serving in the reserves or National Guard upon return from deployment. The literature is full of information about how this attitude and insistence of self-reliance can make it difficult for some service members to seek appropriate psychological help when they are facing psychological issues such as anxiety, depression, or post-traumatic stress disorder while serving at home or abroad (Gould, Greenberg, & Hetherton, 2007). What about those who do not seek help because they do not need it? What about those who do not experience post-traumatic stress disorder (PTSD) but actually experience well-being after their service in combat zones? Little is known about the positive psychology of veterans. Little research has examined the factors such as psychological resilience, combat experiences and post-deployment social support in buffering against PTSD, as well as in supporting well-being.

In contrast, much is known about PTSD, which is diagnosed when a person experiences trauma where they believe their life was in danger, possibly including flashbacks of the event, avoidance of stimuli that are reminders of the trauma, hyperarousal such as being easily startled, among other symptoms such as anxiety or depression that complicate a person's ability to function as they would like in their daily life (*DSM-5*, 2013). PTSD was first recognized as a disorder in 1980 when it was included in the DSM-III (Creamer, Wade, Fletcher, & Forbes, 2011). There is a large extant body of research on PTSD and military veterans as this topic is of importance to the many stakeholders who are invested in service members and their well-being (e.g., Foa & Meadows, 1997; Tolin & Foa, 2006). With the recent wars in Iraq and Afghanistan, interest in the study of PTSD has surged and the number of published studies has increased greatly in that period of time (Gates et al., 2012). Research suggests that rates of PTSD among military personnel and veterans range from 4 to 31% although prevalence rates often vary by study because of differing methodologies, and the measures or criteria that are used, as well as recall bias (Kline et al., 2010; Richardson, Frueh, & Acierno, 2010).

Issues such as PTSD can have deleterious effects on unit readiness for deployment while potentially contributing to problems in the military as well as at home (Marmar, 2009). In this way, PTSD is a complex issue that can have effects on many areas of an individual's life over the course of a potentially protracted period of time (Elsen et al., 2012). Some personnel who are diagnosed with PTSD leave the service with a service-connected disability due to the PTSD, which in turn affects military readiness to perform missions with qualified and experienced personnel.

What is the opposite of PTSD – few experiences of danger, few flashbacks, few depressive or angry episodes or legal issues? Is the opposite of PTSD more social interactions,

feeling of happiness, feelings of productivity and high self-efficacy, as well as satisfying work and loving relationships? These questions remain to be answered although it is hoped that the proposed study might contribute insight into the experiences of military veterans enrolled in college who have deployed to Iraq or Afghanistan and are successfully adjusting to college and life after military service

Exploring how combat experience, resilience, and social support are related to well-being will expand understanding of college student veterans while also expanding the positive psychology of veterans and the understanding of successful adjustment to life as a veteran.

CHAPTER II: Review of the Literature

Student Veterans Transition to College

The transition to college has been noted as a challenging time for college students (Bowman, 2010; Smith & Zhang, 2009). For some first-time college students, this is when they will go out into the world and be on their own with all of the associated responsibilities (Read et al., 2012). Although this is a growing area of research interest, there is a reported lack of quantitative data relating to student veterans and the challenges they might face in a collegiate environment even though student veterans are a growing population on college campuses (Whiteman, Barry, Mroczek, & MacDermid Wadsworth, 2013). In their study, Whiteman et al. examined perceived emotional support of friends in college, mental health, alcohol use, and academic functioning of student veterans and college students who have never been in the military. These researchers found that student veterans reported experiencing less emotional support from peers than civilian students. Although emotional support was found to increase for both groups of students over time, the relationship of emotional support and mental health was found to be stronger for civilian students than student veterans. Although civilian students were found to have a stronger relationship between peer emotional support and mental health than student veterans, peer emotional support is still importantly related to mental health for veterans. Because of the complexity of these findings, the barriers faced by student veterans in seeking and receiving emotional support may be challenging for people on college campuses who work with veterans to understand.

A challenge many veterans face as they begin college is that they are first generation college students who are unfamiliar with the college application process, the demands of college courses, and where to turn to if they need assistance in courses (Wurster, Rinaldi, Woods, & Ming Liu, 2012). In this way, student veterans often face challenges related to college enrollment

as soon as they begin attending classes. Although there are usually people on campuses to aid student veterans with questions or concerns, the assistance is usually more tailored to ensuring the proper paperwork is filled out to receive financial aid or the G.I. Bill. As the number of student veterans continues to increase on campuses across the U.S., the unique experiences and perspectives of these students will be of continued importance as educational institutions seek to provide services and opportunities for their students.

Some studies have found that student veterans who have served in Iraq or Afghanistan may feel isolated from other students at their educational institution while actively desiring interactions with other veterans on campus (Rumann & Hamrick, 2010; Shackelford, 2009; Smith & Zhang, 2009). This desire to be around other military veterans might be related to a desire of the student veteran to be around others who have shared experiences in a place where there are proportionately very few other military veterans. It is not uncommon for student veterans to be older than their class standing peers because their time in the military before entering college creates a potential gap of maturity or differing interests between veterans and non-veteran students (Rumann, Rivera, & Hernandez, 2011). Given that student veterans are often older and potentially more mature than their class standing peers, it is not surprising that some student veterans experience a sense of isolation on college campuses that is difficult to overcome.

While it is clear that student veterans are a growing population on college campuses, it is important to bear in mind that while some veterans will experience difficulties in transitioning to college, many will transition with little to no difficulty to the college experience. The study of those who have successfully transitioned to college is as informative as the study of those who have struggled to transition to college. By having a clear understanding of successful student

veteran transitions to college, we can gain a more holistic understanding of the transition experience for student veterans.

Time in Combat Deployment

A common finding in the research on PTSD is that the longer a service member spends in a combat zone the likelihood of experiencing PTSD increases (Adler, Huffman, Bliese, & Castro, 2005; Shen, Arkes, Kwan, Tan, & Williams, 2010). As the number of combat tours increases for a service member, the likelihood of developing PTSD also increases with each additional tour (Kline et al., 2010). This research looked at a sample of New Jersey National Guard members (N=2,543) who completed a predeployment survey before deploying to Iraq in 2008. Of the sample surveyed, nearly 25% of personnel sampled reported one or more deployment to Iraq or Afghanistan. Measures used in this study included the PTSD Checklist (PCL), depression scale of the Patient Health Questionnaire, and the National Household Survey of Drug Use and Health. In this study, Kline found that soldiers who had previously deployed to Iraq were more than three times more likely to screen positive for PTSD than soldiers who had no previous deployments. There are many reasons this may be the case such as experiencing more time away from home, experiencing more stress due to extreme living conditions, physical and psychological fatigue, as well as experiencing more frequent or severe combat scenarios. Some of these scenarios include being shot at, shooting at the enemy, receiving rocket or mortar fire, as well as taking a life or witnessing severe injury of friends or enemy forces. Although research has shown that the longer a service member spends in a combat zone the more likely they are to develop mental health problems, it is not always possible for a service member to serve only one tour in an active combat zone to reduce the risk of psychological distress. The demands of the modern military often dictate that service members deploy several times over the

course of their time in the service. Additionally, some service members leave the combat zone after serving only one tour with significant psychological injuries that may become aggravated if they serve another tour in a combat zone. Awareness of this concern can be put into action by promoting understanding of trauma in the military up the chain of command so that continued research and treatment options post-deployment can take into account a more holistic understanding of common experiences faced by military personnel. Additionally, educating leaders at all levels of command on mental health while attempting to reduce the stigma of help-seeking behaviors in the military will likely contribute to service members feeling more able to seek help if they are facing psychological difficulties.

Number of Incidents in Combat

There are many types of traumatic incidents a service member can experience in combat such as being shot or shot at, improvised explosive devices (IED's), vehicle born IED′s (VBIED′s) rockets, mortars, and military sexual trauma (MST). Incidences of combat may be related importantly to the level of PTSD experienced (Hoge, Auchterlonie, & Milliken, 2006; Shen et al., 2010) by a service member. The number of combat experiences a veteran can be expected to endure depends in part on their branch of service (i.e., Army, Marines, Air Force, Coast Guard), location of deployment (i.e., Iraq or Afghanistan) (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004; Osran, Smee, Sreenivasan, & Weinberger, 2010) and their job in the military such as infantry or combat arms versus a desk job that will decrease the likelihood of a service member encountering the enemy or minimize the chances of experiencing enemy fire. For example, Hoge et al. (2004), studied members of three Army infantry units and one Marine Corps infantry unit (N = 6,201) using a cross-sectional design. These researchers utilized the Patient Health Questionnaire to assess major depression and generalized anxiety in study

participants. They also administered the PSTD Checklist with a total score of 50 or higher indicating diagnostic criteria for PTSD had been met. There were questions about combat experienced while deployed although the researchers did not use a scale such as the Combat Experiences Scale (CES). Their questions related to combat experiences were modified questions from established scales. For soldiers and Marines, there was a strong relationship between combat experiences such as being shot at, handling dead bodies, or killing enemy combatants in Iraq or Afghanistan and rates of PTSD. These researchers also found a linear relationship with the number of firefights experienced and PTSD prevalence. As the number of firefights went up, so too did the likelihood that a service member would endorse symptoms of PTSD. Further, many service members who endorsed symptoms of PTSD in this study indicated they were not receiving or seeking mental health services and that one reason for this was concern about stigma related to receiving mental health diagnoses and treatment. Of participants who met screening criteria for a mental health disorder, 41% reported that it would be too embarrassing, 50% reported it would harm their career, 65% thought other service members would view them as weak, and 63% thought their unit leadership would treat them different than other Soldiers or Marines. These statistics indicate the variety of perceived barriers to seeking mental health care and illustrate some common concerns faced by service members in the Army and Marine Corps. Although some jobs in the military determine in part the likelihood of experiencing combat, it is often the case that those with a variety of jobs will participate in activities such as military convoys where there is an increased risk for combat exposure. A convoy might include military personnel who are cooks, supply, communication, infantry, and many other occupational specialties moving from one location to another. Although the research has noted that there is a correlation between the number of combat incidents and the likelihood of a future diagnosis of

PTSD, it is important to keep in mind that many service members experience a great number of combat-related traumas and do not develop PTSD (Hoge et al., 2004; Pietrzak & Southwick, 2011). For example, Pietrzak and Southwick studied a cross-sectional sample of OIF and OEF veterans (N = 272) from reserve and National Guard units in Connecticut. Study participants completed a mail survey that examined combat exposure, psychopathology, psychosocial functioning, and social support. Participants were administered a wide variety of instruments. These included the Combat Experiences Scale (CES) (DRRI: King et al., Vogt et al., 2008) which assesses exposure to combat; the Posttraumatic Stress Disorder Checklist – Military Version (PCL-M; Weathers et al., 1991); the Patient Health Questionnaire-9 (PHQ-9; Kroenke & Spitzer, 2002), a 9-item screening instrument for depression; the CAGE Questionnaire (Ewing, 1984) which is a four-item instrument used to identify people with possible alcohol problems; the Psychosocial Difficulties Scale (PDS), which is a 23-item measure that looks at psychosocial functioning in areas such as family, school, work, school, and finances; theConnor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) and the Unit Support Scale (USS) (King et al., 2006; Vogt et al., 2008) which examines leadership support, unit member support, and military support, and lastly, the Postdeployment Social Support Scale (PSSS) (King et al., 2006; Vogt et al., 2008) was included in the study. The researchers found that scores on the PDS were positively correlated with the PCL-M and the PHQ-9 using cluster analysis and logistic regression.

Pietrzak and Southwick also found that veterans in the resilient group (high combat exposure, low PTSD symptoms) were more likely to be in a relationship, serving on active duty, to score lower on psychosocial dysfunction, and score higher on resilience and postdeployment social support. These researchers posited that interventions that mitigate psychosocial

difficulties, increase perception of purpose, and improve family support may help promote resilience in OIF-OEF veterans.

The results of this study are in agreement with much of the literature in this area although study participants were not student veterans and study participants were all from Connecticut. Generalizability of findings would have been improved if participants were recruited nationally as well as from colleges and universities. As important as the number of combat experiences may be in potentially predicting a PTSD diagnosis, it is also important to consider that the number of combat incidents is only one of many considerations related to the well-being of a service member post deployment.

Resilience

Resilience is defined as facing a stressor(s) and overcoming the stressor(s) in manner that does not involve severe psychological injury such as PTSD (Agaibi & Wilson, 2005). Green, Calhoun, Dennis, & Beckham (2010) note that resilience is a response to a situational demand or stressful experience and that people who are resilient find positive meaning in the challenging or traumatic events they endure. Tsai, Harpaz-Rotem, Pietrzak, & Southwick (2012) found that veterans who were diagnosed with PTSD were lower in resilience than veterans who were not diagnosed with PTSD in a cross-sectional study of 164 treatment seeking veterans of Iraq and Afghanistan. Tsai et al found that veterans who were seeking VA primary care or mental health within one year of returning from Iraq and/or Afghanistan and screened positive for PTSD reported more problems in their romantic relationships, less cohesion in their families, lower social support, poorer social functioning, and lower amounts of life satisfaction when compared to other treatment-seeking veterans who did not screen positive for PTSD. Further, Tsai et al. found that veterans who screened positive for PTSD scored significantly lower on positive

acceptance of change, tolerance of negative affect, belief in fate, and availability of secure relationships on the Connor-Davidson Resilience Scale when compared to other treatment-seeking veterans who did not screen positive for PTSD in the study sample. The researchers posited that resilience mediates symptoms of PTSD indicating that veterans who did not screen positive for PTSD scored higher in resilience, which served as a protective factor against symptoms of PTSD.

Inherent in the definition of resilience is that a person must face a stressor to illustrate resilience (Pietrzak & Southwick 2011). With this in mind, it is important to remember that there are a range of stressors ranging from mild to severe and that people also experience different numbers of stressors from zero to many. Examples of common stressors experienced by service members serving in Iraq or Afghanistan include but are not limited to being shot at, witnessing human suffering involving other service members or civilians, rocket attacks, mortars, improvised explosive devices (IEDs), personal injuries, and extended periods of time away from friends and family. When considering resilience in relation to trauma, the types and numbers of stressors should be considered when examining those with PTSD and the severity of their symptoms (Hagenaars, Fisch, & van Minnen, 2011) as well as those who have experienced trauma(s) and do not have PTSD. Additionally, understanding diagnostic rates of PTSD, depressive disorders, and anxiety, as well as well-being scores of those who score high on measures of resilience in comparison to those who score low on resilience will provide insight into the role of resilience in experiencing adversity in student veterans who have deployed to Iraq or Afghanistan.

There is a range of percentages proposed as to the prevalence of PTSD in military personnel. Some estimates are quite high (31%), while others are much lower (1.4%) with some

variation in estimates due to many potential factors including the design of the study or the measures used in the studies (Sundin, Fear, Iversen, Rona, & Wessely, 2010). In this meta-analysis, the researchers examined PTSD prevalence rates of 19 studies with a minimum sample size of 300 while excluding studies based on help-seeking samples. Sundin et al. found that the prevalence of PTSD increases over the 12 months following deployment among personnel who are assessed more than once. Also, studies examining combat exposure and focusing on infantry units that are likely to have more combat experiences compared to other service members were found to report higher rates of PTSD compared to non-infantry samples. Interestingly, the researchers noted studies that utilized anonymous assessment reported higher prevalence of PTSD but these studies also focus on infantry units, which are more likely to see high amounts of combat. This complicates the differentiation of high levels of combat exposure and the anonymous element of the screening versus on-the-record screening. Further, studies using on-the-record screenings of PTSD were found to report lower rates of PTSD compared to studies using anonymous screenings. Additionally, the amount of time after deployment may be a consideration when examining the prevalence rates of PTSD. Studies that administer screenings of PTSD shortly after a deployment tend to report lower prevalence than studies administered longer after deployment. This may be because the return home is often exciting and relieving and may allow for mental health problems to be minimized or viewed as not problematic until the joy and relief of returning home fades.

A majority of those who serve in combat zones do not develop PTSD. Some service members can serve years in combat and not have PTSD or related symptoms while others might have a single incident that triggers problematic PTSD symptoms for years to come. The question becomes how is it that some people do not develop PTSD while others do? Some studies suggest

that resilience is a protective factor for preventing PTSD (Bonanno, Galea, Bucciarelli, & Vlahov, 2006, Bonanno, Galea, Bucciarelli, & Vlahov, 2007; Escolas, Pitts, Safer, & Bartone, 2013), but is resilience also a predictor of well-being? Some studies (Green et al., 2010) have found that while resilience might not be directly related to well-being, those who are higher in resilience tend to fare better after facing traumatic situations (i.e., fewer psychological difficulties) than those who are not resilient. Green et al. investigated the construct of resilience in PTSD severity in a sample of 497 combat veterans who completed the Traumatic Life Events Questionnaire (TLEQ), the Combat Exposure Scale, the Connor-Davidson Resilience Scale (CD-RISC), the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID), the Davidson Trauma Scale (DTS), the Alcohol Use Disorders Identification Test (AUDIT), the Beck Depression Inventory (BDI-II), the Beck Scale for Suicide Ideation (BSI), the National Vietnam Veterans Readjustment Study Self-Reported Medical Questionnaire, the Symptom Checklist-90-Revised (SCL-90-R), and the General Symptom Index (GSI). The researchers conducted univariate analyses (2-tailed *t* tests) for continuous variables and χ^2 for categorical variables. They then conducted a multivariate logistic regression to evaluate the association between trauma exposure, resilience, and presence or absence of PTSD. Those with PTSD were lower in resilience, more likely to be depressed, and more often unemployed than other participants who were not suffering from PTSD. Decreased resilience, younger age, and higher scores on the TLEQ were associated with higher suicidality score on the BSI. Interestingly, resilience was associated with lower AUDIT scores even after researchers accounted for the presence of PTSD. Even among veterans who experienced high levels of combat, resilience appeared to function as a protective psychological factor. Clearly, resilience is an important and far reaching

consideration when looking at well-being and trauma in the military and veteran population. It might be useful to look at this in the college student population.

Well-Being

The idea of psychological well-being has been a topic of interest in the field of psychology for some time now (Ryff, 1989a). Perhaps well-being could be considered the opposite of PTSD. The concept of well-being has been an area of interest for many due to the almost exclusive focus of psychology on psychopathology as well as a sense of curiosity about why some people are affected in different manners after suffering the same traumatic experience(s). Many people assume that when a person experiences a negative or traumatic event that there will be more of a detrimental effect on well-being than is often found in empirical research (Luhmann, Hofmann, Eid, & Lucas, 2011). This is not to say that people experience trauma and are not affected by it, but that people often recover from a traumatic event and return to their previous level of happiness or well-being as before the event. Well-being can be conceptualized as including gratitude, self-esteem, and positive social activity (Kashdan, Julian, Merritt, & Uswatte, 2006). Kashdan, Uswatte, & Julian (2006) conducted a study with Vietnam veterans who were participating in a 4-week residential mental health treatment program at the Veterans Affairs (VA) Medical Center in Buffalo, NY (n = 22), veterans in the Buffalo area who were not diagnosed with PTSD (n = 35), and veterans who were outpatient and diagnosed with PTSD (n = 20). Participants in the study completed the 6-item Gratitude Questionnaire-6 (GQ-6), daily reports for 14 days (Gratitude Adjectives Checklist; Emmons & McCullough, 2003; McCullough, Emmons, & Tsang, 2002), the Mississippi Scale to determine severity of PTSD symptoms (Keane, Caddell, & Taylor, 1998), the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), daily reports on positive affect (PA), negative

affect (NA) using six adjectives for PA and NA that were used in prior affect studies. The researchers also created two indices of hedonic well-being (i.e., daily affect balance and percentage of happy days) using the daily reports of affect. Study participants also took four items from the Rosenberg Self-Esteem Scale to assess daily eudaimonic well-being. Interestingly, all veterans in the sample who had PTSD experienced combat while 91% of veterans in the sample who did not have PTSD did not experience combat. The researchers note that exposure to war zone stressors might be the reason for group differences in gratitude and well-being as opposed to the presence of PTSD. They also found that Vietnam veterans with PTSD reported less trait gratitude than Vietnam veterans without PTSD. Trait gratitude was found to be a unique predictor of daily well-being in the PTSD group but not in the non-PTSD group. Also, daily gratitude was positively associated with rewarding social activity while veterans with PTSD as well as those in the non-PTSD group benefited due to the fact that gratitude can be experienced by anyone with or without a psychiatric diagnosis. The results of this study provide insight into the way that gratitude and PTSD interact although there are several limitations. First, study participants were only from the Buffalo area. It is hard to say if these results would be replicated with a more geographically diverse sample of veterans. Second, all veterans in this study were Vietnam veterans. It would have been interesting to see if similar results would have been found in Iraq or Afghanistan veterans. One of the most promising aspects of this study is the use of several positive psychology constructs to understand PTSD. Constructs such as gratitude, self-esteem and positive social activity are important considerations to keep in mind when conducting research with participants who have a history of trauma. Gaining a clearer understanding of the influence or impact of these constructs on one another in

relation to resilience, PTSD, social support, or combat experiences would provide interesting insights into complex phenomenon.

Ryff & Keyes (1995) noted six dimensions of psychological well-being. These are autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each of these dimensions is viewed as a part of resilience and a person can be high in one or more of these dimensions or low on one or all of these dimensions. More generally, well-being can be defined as a person's subjective experience of their psychological quality of life that is multidimensional (Wang & Castaneda-Sound, 2008). As can be seen in the research, the concept of well-being is a complex construct that includes many different facets. A benefit of conceptualizing resilience in a manner that includes several dimensions is it becomes possible to have a more in depth understanding of the individual experiences of well-being as opposed to a single sum score that may not be capable of providing such a level of insight. When considering well-being in a sample of student veterans who have served in Iraq or Afghanistan, it is important to consider the construct of well-being in light of experiences service members may have had during their tour overseas.

Social Support as a Protective Factor

Post-deployment social support can have a protective function against PTSD and depression (James, Van Kampen, Miller, & Engdahl, 2013; Ozer, Best, Lipsey, & Weiss, 2008; Polusny et al., 2011). Pietrzak et al. (2010) completed a study in which 272 OIF/OEF veterans completed a survey consisting of PTSD and depression screening measures, questionnaires assessing resilience, social support, and psychosocial functioning. In this study, the researchers found that veterans who had lower postdeployment social support also scored lower on resilience and psychosocial functioning. These researchers also found that postdeployment social support

partially mediated the association between PTSD, depressive symptoms, and psychosocial functioning. There are varying types of social support ranging from the support of friends, family, spouse, military peers, and non-military peers among others that can aid in recovering from or processing a stressful or traumatic event (Laffaye, Cavella, Drescher, & Rosen, 2008). Laffaye et al. examined the relationship between PTSD and positive (interpersonal resources) and negative (interpersonal stressors) social support in a sample of 128 male veterans who completed a residential treatment program for PTSD. A packet containing study materials was sent to prospective participants. Veterans who agreed to complete the follow up were mailed the same survey six months later (N = 128). Study participants took the PTSD Checklist- Military (PCL-M) version to assess PTSD symptom severity. A total score of 50 or higher on the PCL-M is the accepted cutoff for likely PTSD diagnosis. Participants were also asked about the size of their social networks in the areas of family, nonveteran friends, and veteran peers. The researchers asked participants how many people in each area of their social network they could talk to if needed and how many they have talked to about personal problems in the last six months. The interpersonal resources and interpersonal stressors scales of the Life Stressors and Social Resources Inventory (LISRES) were administered. Interestingly, veteran peers and spouses were rated higher than nonveteran friends and relatives on initial ratings of perceived interpersonal resources. Also, these researchers found veteran peers were the most common source of emotional support for study participants while marital relationships were characterized by equal amounts of support and stress. Also, it seems as though the benefits of social support are reduced once PTSD becomes chronic. The more severe the PTSD that is experienced, the more interpersonal stress that is experienced by the veteran when interacting with nonveteran and veteran friends although friendships with veteran peers and nonveterans was found to

involve more interpersonal resources than stressors. The use of social support and resources may have implications on presence or absence of PTSD and well-being experienced by veterans.

Although each individual and circumstance varies, research has found that social support is a factor involved in the development and maintenance of PTSD (Guay, Billette, & Marchand, 2006). Those service members who have served in Iraq or Afghanistan and who have a high level of perceived social support have a potential advantage in relation to well-being than those veterans who have a lower perceived level of social support. As discussed in Laffaye et al. (2008), not all types of social support were as beneficial to military veterans suffering from PTSD with social support from other veterans identified as quite beneficial. An interesting feature worth noting regarding social support is that it is more of a dynamic versus static construct. Over the course of time depending on the needs and circumstances of the individual, there will be times when it is likely to have more or less social support that can be used as a protective factor against stressful and challenging life circumstances (Newcomb, 1990; Sarason, Sarason, & Shearin, 1986). The dynamic nature of social support means that at certain points the same person may be high in social support, low in social support, and then high again. Postdeployment social support is a construct that is likely to vary and be very subjective in the amount that is perceived by each person. Additionally, it is possible for a person to have a great deal of social support available to them and choose not to utilize available social supports due to other factors such as PTSD (Jakupcak et al., 2010).

This issue is further complicated when we consider the role of PTSD in social support. Jakupcak et al. (2010) note that veterans who have been diagnosed with PTSD might seek social support more than veterans without PTSD although PTSD may mitigate the protective factors of social support thus diminishing the positive benefit of social support. DeBeer, Kimbrel, Meyer,

Gulliver, and Morissette (2014) noted that PTSD had almost no effect on suicidal ideation when social support was higher although when post-deployment social support was lower PTSD symptoms were found to be associated with elevated risk of suicidal ideation. In their study, the researchers recruited Iraq and Afghanistan veterans (N = 130) from the Central Texas Veterans Health Care System (CTVHCS). These researchers were interested in determining the relationship between PTSD, depression, suicidal ideation (SI), and post-deployment social support. Participants completed sections of the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) to screen potential participants for bipolar and psychotic disorders. Participants then completed a demographic questionnaire, the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995) to determine intensity and frequency of PTSD symptoms. Participants also took the PTSD Checklist- Military Version (PCL-M) to assess PTSD symptoms within the last month. The Anxiety Disorders Interview-IV (ADIS-IV), the Beck Depression Inventory-II (BDI-II), the Beck Scale for Suicide Ideation (BSS), and the post-deployment social support scale (PDSS) were also administered. This study found that veterans who reported elevated PTSD-depressive symptoms and low post-deployment social support may be at increased risk of suicidal ideation. This finding makes clear the importance of perceived post-deployment social support. Veterans in this sample who had high-perceived post-deployment social support yet also experienced PTSD and depressive symptoms were not found to be at increased risk of suicidal ideation. These researchers suggest considering the role of social support in clinical settings with veterans who have PTSD, depression, or suicidal ideation. By considering the role of social support in clinical settings, clinicians will consider a more holistic understanding of the experiences of the veterans they are working with. Further, Jakupcak et al. (2010) noted that the perceived quality of social support is higher in veterans who do not have

PTSD when compared to veterans diagnosed with PTSD. This suggests that the presence or absence of PTSD might be a mitigating factor in determining the quality and likelihood that perceived social support will be utilized by student veterans. With these considerations in mind, it is clear that simply having a social support network is not enough to ensure that a veteran will use or benefit from their social support network (Wilcox, 2010). The implications of these findings can be applied to clinical and non-clinical populations of military veterans as a way of gaining further understanding of the role of social support in well-being with veterans.

It should be noted that of all of the studies surveyed here with the exception of Ryff (1995) and Bonano et al. (2007), the vast majority focus on psychopathology as opposed to positive psychological constructs.

The Present Study

The first research question of the proposed study is whether combat history and well-being are related to one another in student veteran populations who have served in Iraq or Afghanistan. Recent research (Burnett-Zeigler et al., 2011) has shown that as the number of combat incidents increases the likelihood of having issues related to employment, transitioning back to civilian life (Adler, Britt, Castro, McGurk, & Bliese, 2011), and a decreased sense of well-being (Wilcox, 2010). Although there are any number of combat experiences a service member can experience in Iraq or Afghanistan, gaining an understanding of what a service member has experienced, how many incidents a service member has experienced, and what if any impact those experiences had on the service member will aid in gaining a better understanding of the possible relationship between combat incidents and measured well-being.

The second research question of the proposed study asks are resilience and well-being related to one another? The research literature on resilience as related to well-being has shown

that those individuals who are more resilient have a higher sense of well-being after enduring a traumatic event(s) (Pietrzak & Southwick, 2011). When people are higher in resilience, they are more able to endure a stressor or traumatic event and find a way of successfully making meaning of the event leading to less difficulty coping with the event and a higher level of well-being (Green et al., 2010).

The third research question of the proposed study asks are social support and well-being related to one another and if they are related in what way?

The fourth research question is how each of these constructs interacts with one another to contribute to well-being will help elucidate the many complicated relationships that Iraq and Afghanistan veterans experience while in college. As the number of veterans who attend college continue to increase, it is important to achieve a better understanding of some of the unique experiences and potential concerns related to this particular population.

It is hypothesized, therefore, that scores on the Combat Experiences Scale (CES), Response to Stressful Experiences Scale, and the Postdeployment Social Support Scale (PDSS) would be related to well-being as reported on the Ryff Scales of Well-Being by veterans in this study. Based on the literature, it may be that those who score lower on the combat history questionnaire, higher on the resilience scale, and higher on the social support scale will score higher on the well-being scale. This possibility was explored in this study.

CHAPTER III: Methodology

Design

This study investigated the characteristics of a specific group of military veterans who have served in Iraq, Afghanistan, or both, and who are also currently enrolled in college. This study explored the relationships between the variables of resilience, post deployment social support, combat incidents, (i.e., number of deployments, length of deployments, number of times attacked, etc.) and well-being in veterans who have made the transition to college. Participants from universities all over the U.S. were recruited in an attempt to make the sample as representative as possible of student-veterans.

Participants

Study participants were a sample of student-veterans. Participants were selected based on their military service in Iraq or Afghanistan, as well as their status as full-time college students. Study participants were not randomly selected or assigned. A power analysis was performed to ascertain the ideal number of participants per variable to attain sufficient statistical power (.07); 62 or more participants were needed.

Study participants were (N=59) Iraq and Afghanistan veterans who were enrolled as full-time college students when they participated in the study. Veterans from all branches of military service (Army, Navy, Marine Corps, Air Force, and Coast Guard), as well as those with no combat exposure and direct combat exposure were eligible to participate as long as they served in Iraq or Afghanistan and were in college when they completed the study survey.

Exclusion criteria for study participation are veterans that did not serve in Iraq or Afghanistan, veterans who are not currently attending college, and anyone who has never been in

college or the military serving in Iraq or Afghanistan. Each participant was asked questions regarding where they have served and their attendance in college in the demographic section of the survey to ensure they meet criteria for participation in the study. Veterans from all branches of military service were eligible to participate in the study assuming they meet the study requirements.

After data collection, there were a total of 59 study participants. Data for five participants could not be used due to too much missing information. The five participants who could not be used in the study filled out the demographic information and did not answer the questions from the measures used in the survey or had far too many pieces of missing data to compute meaningful results.

Measures

Combat Experiences Scale (CES). The combat experiences scale (see Appendix A) is a 17-item self-report instrument from the Deployment Risk and Resilience Inventory (DDRI; King, King, Vogt, Knight, & Samper, 2006; Vogt, Proctor, King, King, & Vasterling, 2008). The response options for this measure are a six point Likert scale with one being never and six being daily or almost daily. The combat experiences scale has demonstrated good psychometric properties. The CES was found to have high item internal consistency with $\alpha = .91$ according to the DRRI manual (Vogt, Smith, King, & King, 2001). Further, the CES was found to correlate with PTSD severity ($r = .45$), depression ($r = .20$), and anxiety ($r = .23$) providing evidence of criterion related validity for this scale. The manual authors also found that the CES has good discriminative validity. When comparing men and women, the manual reports that male service members are more likely to report exposure to combat events because more male service

members are in combat arms and related jobs in the military (Men $M = 29.71$, Women $M = 22.22$, $t = 10.62$, $p < .05$).

Postdeployment Social Support Scale (PSSS). The post deployment social support scale (see Appendix B) is a self-report instrument from the Deployment Risk and Resilience Inventory (DDRI; King et al., 2006). This measure is a subscale of the DDRI designed for use with the other measures included in the DDRI or for independent use. The construct of postdeployment social support is defined as friends, family, and coworkers providing support and assistance (Vogt et al., 2008). The response format is a 5-point Likert format with one being strongly disagree and five being strongly agree. This scale is designed to help determine what sources of support a veteran has after deploying in the military and provides a sum score of the 15 items that is indicative of the amount of perceived postdeployment social support. Scores in the range of 15-39 indicate low acuity. Scores between 40-59 are indicative of moderate acuity, and scores between 60-75 indicate high acuity. Items six and eight are reverse scored on this measure while the rest of the items are scores regularly. The PSSS was found to have an internal consistency reliability $\alpha = 0.90$ (Vogt, Smith, King, & King, 2001). The PSSS is negatively correlated with PTSD ($r = -.46$), negatively correlated with depression ($r = -.44$), and negatively correlated with anxiety ($r = -.41$).

Response to Stressful Experiences Scale (RSES). The Response to Stressful Experiences Scale (RSES) (see Appendix C) is a brief 22 item self-report measure based on a 5-point Likert scale ranging from 0-4 (Johnson et al., 2011). On this measure, higher scores indicate greater resilience while lower scores are indicative of less resilience. The scale was validated using a mixture of active duty and reserve component military personnel with an N = 1,014. This scale emphasizes coping processes and is a measure of resilience. Scores can range

from 0-88. Scores between 0-49 are indicative of low resilience, scores between 50-70 indicate moderate resilience, and scores between 71-88 are considered high in resilience. This scale was found to have good internal consistency (α = .91-.93) as well as good test-retest reliability (*r* = .87). The Combat Experiences Scale was also administered to participants in this study, and Cronbach's α = 0.81, α = 0.86, and α = 0.92 for the three samples in the Johnson et al. study. Participants also completed the Postdeployment Social Support Scale for which Cronbach's α = 0.85.

The Ryff Scales of Well-Being. The Ryff Scales of Well-Being (see Appendix D) were developed by Carol Ryff, PhD. The six scales that comprise the measure are self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989b). Responses are on a Likert scale with strong disagreement (1), moderately disagree (2), slightly agree (3), slightly agree (4), moderately agree (5), and strong agreement (6). There are three length options for the Ryff Scales of Well-Being: 14 item scales for a total of 84 items, 9 item scales for a total of 54 items, and three item scales for a total of 18 items. Further, there are no specific scores or cutoff points to determine whether a person is rated high or low in well-being. The instructions to the scale recommend using distributional information from the data collected in the study utilizing the Ryff Scales of Well-Being. One possible way of doing this is to say that participants who score in the top 25% of the distribution of collected data are high in well-being, while low well-being might be the bottom 25% of the distribution of collected data. Participants in this study took the 84-item version of the scale. For each of the six categories the responses are totaled with some items being reverse scored. A high score on a scale indicates that the participant has a high level of mastery in that area of life while a low score on a scale indicate a lack of mastery in that area of life.

Characteristics of High and Low Scorers of Each Scale of the Ryff Scales of Well-being

Participants who score high on the Autonomy scale are self-determined and independent while participants who score low on Autonomy are more likely to worry about social pressures and worry about what other people think of them. Those who score high on Environmental Mastery exert control over their environment and are able to manage external factors well. Low scorers on Environmental Mastery are not as adept at managing external environmental factors and may face difficulty in managing every day affairs. High scorers on the Personal Growth scale have a sense of continued development and growth. They are often open to new experiences and realize their potential. Participants who score high on the Positive Relations With Others scale have meaningful relationships with other people while recognizing the inherent value of people. Those who score low on this scale tend to be more of a loner having few if any close friends or meaningful relationships. Low scorers may not value social relationships in the manner that those who score high on this scale does. Participants who score high on the Purpose In Life scale have a sense of directedness. They tend to value and appreciate what they have learned in past experiences and enjoy the present. Alternatively, participants who score low on this scale lack a sense of meaning in life and may not have many goals they seek to achieve. People who score high on the Self-Acceptance scale have a positive attitude toward self. They tend to understand and appreciate what they and others consider to be good and bad about themselves. They acknowledge and accept the multiple aspects of self. Those who score low on this particular scale may feel dissatisfied with the multiple aspects of self and may be disappointed with things they don't like about themselves. Each scale of the Ryff was based on formulations and conceptualizations from positive psychology literature (Ryff, 1995).

Psychometric Data For the Ryff Scales

According to the instructions provided with the Ryff scales, the Autonomy scale has an internal consistency (coefficient alpha) =.83 with a .97 correlation with the 20 item parent scale. The Environmental Mastery scale has an internal consistency (coefficient alpha) =.86 with a .98 correlation with the 20 item parent scale. The Personal Growth scale has internal consistency (coefficient alpha) =.85 with correlation with the 20 item parent scale =.97. For the Positive Relations With Others Scale, internal consistency (coefficient alpha) =.88 with correlation with the 20 item parent scale =.98. With the Purpose in Life Scale, internal consistency (coefficient alpha) =.88 with correlation with the 20 item parent scale =.98. Internal consistency (coefficient alpha) for the Self-Acceptance scale =.91 with correlation with the 20-item parent scale =.99.

Procedures

The study was approved by HSCL (STUDY00002495). Student veteran groups at several universities, VA liaisons on college campuses, and veterans groups on the internet were contacted with the study proposal explaining the purpose of the study, the expected time to complete the study, as well as any possible considerations regarding potential for gain, harm, issues of confidentiality of data, and the proposed methods and procedures of the study. When preparing to send my survey to universities across the United States, I found a list of public universities alphabetized by state. I used this list to find contact information for universities across the U.S. I contacted universities from each state to recruit potential study participants and posted my study description and link on a Iraq and Afghanistan veteran Facebook page. I also utilized Facebook messenger to contact student veteran groups from universities across the U.S. seeking permission to post a study description and link on their Facebook page.

The study materials were administered online through Qualtrics, a survey service similar to Survey monkey. Before beginning the study, participants were shown an informed consent with a brief description of the study and were be able to continue to the study or leave the study at that time if they chose not to participate. In the informed consent, participants were informed that they were free to leave the study at any time without penalty. The study began with the participant clicking continue acknowledging they had read the informed consent form. As a means of protecting confidentiality each study participant was assigned a participant number to be used in data analysis. Participants were not compensated for their participation and there are not any known risks associated with participation in this study.

Experiment Outcome And Debriefing: Participants were thoroughly debriefed upon completion of the study about the procedures and purpose of the proposed study. The debriefing was electronic in format with contact information provided for the primary researcher and faculty advisor. The experimenter reiterated confidentiality of the data and information gathered. Participants were given the opportunity to ask any questions they might have had regarding their participation in the study by electronically contacting the primary investigator.

CHAPTER IV: Results

Descriptives

Descriptive statistics for all demographic variables were calculated. The current mean age of participants in the sample was 34 (M = 33.54, SD = 6.86) with two respondents not providing their current age. The age range was 24 to 56. The age for student-veterans on their most recent deployment was 25 (M = 25.53, SD = 9.90) with 16 respondents not providing an age and three respondents providing an age of zero on their most recent deployment. The age range on the most recent deployment was zero to 48.

All branches of military service were represented except for the Coast Guard. Thirty-seven participants (62.7%) were or are in the Army, 10 participants (16.9%) were or are in the Marine Corps, four (6.8%) were or are in the Navy, and eight participants (13.6%) were a part of the Air Force.

While deployed, 44 participants (74.6%) were on active duty, 8 participants (13.6%) were on reserve status, and 7 (11.9%) were with the National Guard.

In the sample, 26 (44.1%) of participants deployed to Iraq, 15 (25.4%) of participants deployed to Afghanistan, and 18 (30.5%) of participants deployed to Iraq and Afghanistan.

Twenty one participants (35.6%) deployed one time, 26 (44.1%) of participants deployed two times, 5 (8.5%) participants deployed three times, 7 (11.9%) deployed four or more times.

The average amount of total time spent on deployment to Iraq or Afghanistan was 18 months (M = 17.93, SD = 11.15) with a range of 5 to 63 months.

Of the sample, 33 (55.9%) do not currently have children. A total of 10 (16.9%) of participants have 1 child, 8 participants (13.6%) have 2 children, 4 participants (6.8%) have 3

children and 3 participants (5.1%) have 4 or more children. One study participant did not respond to this question.

The study sample was comprised of 41 males (69.5%) and 18 females (30.5%).

Study participants identified as heterosexual (*n* = 55, 93.2%), gay (*n* = 1, 1.7%), and lesbian (*n* = 2, 3.4%). One participant did not indicate sexual orientation.

On their most recent deployment, 29 (49.2%) of respondents were married while 30 (50.8%) of respondents were single.

Of 59 total participants, 36 (61.0%) are currently married while 23 (39.0%) are currently single.

In the study sample, 41 (69.5%) of participants did not have a diagnosis of PTSD while 18 (30.5%) reported having a diagnosis of PTSD.

Means and Standard Deviations for Regression Predictors and Criterion

The mean well-being score on well-being for the sample was 378.73 (n = 59, SD = 56.71). With a range of possible total scores being from 84 to 504, the mean for this group is above the middle of the range (294). Unfortunately, Ryff (1989) does not give norms for this scale, so that this mean cannot be compared to the general population. On the Combat Experiences Scale (*M* = 36.36, *SD* = 16.19). On the Postdeployment Social Support Scale (*M* = 55.39, *SD* = 10.19), which is considered to be moderate acuity. On the resilience measure (*M* = 43.12, *SD* = 12.50). The mean of the whole group, therefore, is considered slightly lower than moderate resilience.

Table 1

Descriptive Statistics of Variables

	Mean	Std. Deviation	N
WBTotal	378.73	56.71	59
CESScore	36.36	16.19	59
PDSSTotal	55.39	10.18	59
ResTotal	43.12	12.50	59

Participants had (*M* = 55.39, *SD* = 10.19) on the postdeployment social support scale, (*M* = 36.36, *SD* = 16.19) on the combat experiences scale, (*M* = 43.12, *SD* = 12.50) on the resilience measure, and (*M* = 378.73, *SD* = 56.71) on well-being total.

Table 2

Descriptives

	N	Minimum	Maximum	Mean	Std. Deviation
PDSSTotal	59	23	75	55.39	10.19
CESScore	59	17	72	36.36	16.19
ResTTOTAL	59	22	68	43.12	12.50
WBTotal	59	274	480	378.73	56.71

Multiple Regression

To analyze the data of the study, I conducted a multiple regression with combat history, resilience, and post deployment social support as the predictor variables and well-being as the criterion variable. A multiple regression determined the amount of variance that can be explained by each variable and the strength of the relationship with the criterion variable of well-being. The results showed combat experiences did not predict well-being (*r* = -.208); Social support predicted well-being (*r* = .621). Resilience predicted well-being (*r* = .736). Approximately 60% of the variability in well-being was accounted for by the criterion variables (Adjusted R^2= .595).

Correlations of Predictor Variables and Criterion Variable

Table 3

Correlation Table

	WBTotal	Resilience	PDSS Total	CES Score
Well-Being	1.00	.74	.62	-.21
Resilience	.74	1.00	.54	-.22
PDSS Total	.62	.54	1.00	-.22
CES Score	-.21	-.22	-.22	1.00

Source Table For Regression

Table 4

Regression Table

	t	Sig	VIF
(Constant)	3.31	.002	
Resilience Sum	5.62	.000	1.43
PDSSTotal	3.15	.003	1.43
CESScore	-.14	.892	1.07

Multicollinearity test. Although some multicollinearity was present, it was not enough to warrant concern. The relationship between social support and resilience was found to be significant at the .01 level, $r = .000$. This indicates the presence of multicollinearity; however, an analysis of multicollinearity (Variance inflation factor) revealed value of the resilience sum VIF of 1.428 and social support sum VIF of 1.427, indicating very little inflation of variance as a result of multicollinearity.

Post-hoc Exploratory Analyses. A post-hoc paired samples *t*-test was conducted to examine the difference in means between student-veterans had been diagnosed with PTSD or those who had not on their well-being. Results indicated a $p = .024$, and $F = 5.367$, revealing a

significant relationship with PTSD and well-being. According to the results of test of means, those student veterans who were not diagnosed with PTSD were found to be higher in well-being than veterans in the sample who had been diagnosed with PTSD. A post-hoc analysis was conducted to determine if marital status of student-veterans in the study sample was related to well-being. Study participants who are currently married had higher scores on well-being than study participants who were not married (Married; $M = 388.028$; Single; $M = 364.174$).

Males and females were not significantly different in well-being scores ($F = 1.718$). When entered into the multiple regression as predictors, none of these variables were significantly related to well-being, nor did they account for variance in more than minimal ways. Power was not high enough to report these results.

The correlation between combat experiences score and postdeployment social support was not significant, $r = 0.090$ illustrating that these two variables are not correlated in a meaningful manner. The correlation between combat experiences score and resilience was not significant, $r = .087$.

Social support and combat experiences were not significantly correlated, $r = .090$. This finding shows that these two variables are not related to a degree where one predicts the presence or absence of the other. As with combat experiences and resilience, respondents answered questions related to these variables in a varied manner.

Chapter V: Discussion

Most research on veterans focuses on negative outcomes such as PTSD and suicide, but little is known about positive outcomes for veterans of Iraq and Afghanistan. Although research on PTSD, suicide, and other issues relevant to the community is extremely important and relevant, studies on positive outcomes for veterans are also important and relevant to help provide a well-rounded understanding of the experiences of Iraq and Afghanistan military veterans. The purpose of the present study was to examine the relationship of combat history, resilience, and postdeployment social support to the well-being of a sample of military veterans who have served in Iraq or Afghanistan and who have successfully transitioned into college. This study examined well-being because of the lack of research on veterans who have deployed to Iraq, Afghanistan, or both, and successfully made the transition home and to college..

A multiple regression was used to determine how much unique variance each factor contributed to well-being. It was hypothesized that the amount of combat history, resilience, and social support were related to well-being. Although combat history was not found to predict well-being, resilience and social support were found to be related to college veterans' well-being. The relationship of each of these variables with well-being helped provide insight and understanding of the experiences of student-veterans who participated in this study.

Combat Experiences were not found to be a predictor of well-being. In previous research, participants who have experienced a lot of combat did not necessarily score high on measures of PTSD symptomology. For example, Pietrzak and Southwick (2011) had a high resilience group in their study that scored high on combat incidents but scored low on measures of PTSD symptoms on the PCL-M. These researchers also utilized the Combat Experiences Scale (CES) from the DRRI as in the current study. Alternatively, other researchers have found

that the more combat a servicemember experiences (i.e. firefights), the more likely it is that servicemember will develop PTSD (Hoge et al., 2004).

This may because of the differences in how people respond to stressful and traumatic situations. Some people can experience many stressors without enduring negative consequences such as PTSD (Bonanno et al., 2006; Bonanno et al., 2007). The fact that the relationship between the number of combat experiences and well-being was not statistically significant might suggests there is a great deal of variation in how participants in this sample responded to stresses and traumas experienced on deployment. For example, postdeployment social support as well as resilience might have been might have provided both the external and internal strengths needed to cope with the number of combat experiences the student-veteran experienced in Iraq or Afghanistan. Unlike previous studies showing a relationship between extreme or numerous combat experiences and negative outcomes, this study focused on veterans who were enrolled in college. This group may already have overcome or coped with the negative consequences of these experiences before enrolling in college.

The relationship of postdeployment social support and well-being was found to be significant indicating that postdeployment social support is an important factor in relationship to well-being. This result highlights the importance of community and family upon return home for student-veterans in this sample (Laffaye et al., 2008). It seems that veterans can have a high or low number of combat incidents on deployment and still maintain a high level of well-being upon returning home if they have the types of postdeployment social support that a particular veteran finds important. College campuses might be a difficult place for student-veterans to build a sense of community similar to that many veterans report experiencing in the military. Many times, student-veterans who have served overseas are older than their college student peers in the

same class standing. Age difference as well as maturity and life experience differences might make it challenging for student-veterans to find people they can connect with on campus. In this way, many student veterans attending college may experience a sense of isolation from other students in their classes. Resources such as friends who understand the military worldview, who are similar in maturity, as well as family, and partners are all important in ensuring the veteran has positive relationships with others in which they are able to communicate needs and desires (Laffaye et al., 2008). Interestingly, an examination of the responses to items showed that partners, family, and military friends were more important to college veterans than student peers and friends, reflecting the veterans' greater maturity.

Resilience was found to be related to well-being. It may be helpful to look at the specific items of both instruments. Six of the 22 items referred to meaning, purpose, and spirituality, and while these received moderately high endorsements, the highest endorsements were for items that indicated strong self-reliance and action-orientation. One major study of veterans' spirituality, meaning, and purpose found a decline in faith and concern about these issues (Fontana & Rosenheck, 2004); in this study, these sources of resilience remained strong, but confidence in one's own abilities to solve problems was stronger. College veterans, who have already taken action in enrolling in college, engaging in college, and succeeding are likely to be those who are most self-reliant and action oriented

A moderate correlation was found between two of the predictors – social support and resilience. In fact, there was overlap in the meanings of many of the items on these scales that concerned successful and supportive relationships with others. Student veterans who have more resilience may be more likely to see and increase in the possibility of new social networks and reinforcement. Social support is related to the desire or ability of a student-veteran to reach out to

others for a variety of reasons thus making it more likely they will have people in their life that can serve in the role of social support when needed. In short, they have a richer environment that may promote the further development of personal resilience than those who do not seek social support or go to friends for help. It is possible that those student-veterans who are higher in resilience reach out for help without the fear of appearing weak. There is a well noted stigma in the military about seeking help and it is possible that some people who could benefit from help might not seek help due to fear of being stigmatized (Greene-Shortridge, Britt, & Castro, 2007; Kim, Britt, Klocko, Riviere, & Adler, 2011). Much can be learned from understanding how college veterans move beyond the fear of stigma in order to make use of peers, faculty, and student affairs staff for support and assistance while being involved in their neighborhood, community, and society in general. (Laffaye et al., 2008; Pietrzak et al., 2010).

Student veterans are a unique part of campus culture that are not as researched as some other student populations. There are many unique issues and circumstances that student-veterans often face, such as dealing with the transition to college after deploying to an active combat zone or starting their college education at an older age facing many of the challenges faced by nontraditional college students. For this study, I chose to examine Iraq and Afghanistan student-veterans for the fact that they have by definition deployed to a hostile environment while a part of the armed forces. In that regard, they have often experienced things that most people will never experience. Although many student-veterans have faced extreme challenges during their deployment to Iraq or Afghanistan, most do not develop PTSD and go on to live “normal” lives after their deployment(s) and military service.

Limitations

One limitation of this study is there is no way of determining the response rate of participants. Although study materials were sent to universities electronically and via Facebook pages, there is no way of knowing how many student-veterans saw the study proposal and declined to participate. Also, it is possible that many veterans were not included in the e-mails sent out by university representatives who sent the materials. Each university maintains records of student-veterans based on who is receiving veteran's benefits such as the G.I. Bill. It is not clear if student veterans are accurately identified as veterans if they are attending a university but are not receiving veterans' benefits. It is possible that veterans not receiving education benefits would not be identified by their university as student-veterans resulting in not being aware of the study and the opportunity to participate. This could have inadvertently led to some student veterans not being invited to participate in this study even though they met criteria for study participation. Additionally, I was never given the number of student-veterans at each institution I contacted and there is no way of ensuring that all Iraq or Afghanistan veterans on each campus were included in the study recruitment.

A second limitation of the current study is the small sample size. Although the sample was large enough to ensure sufficient statistical power, it is likely too small to generalize the results to all student-veterans enrolled in college nationally. There are a large number of Iraq/Afghanistan student-veterans in college nationally, and my sample represents a small portion of this population. A larger sample would allow for more generalizability of statistical findings and possibly allow for the investigation of more variables to provide even more insight into statistical findings. Military veterans are a challenging population of study due to factors such as correct identification of veterans by colleges and universities as well as ensuring study materials reach as many participants as possible.

While not a randomly selected group, every effort was made to recruit a group of participants who represented veterans currently enrolled in college. Universities and colleges from all over the United States were contacted in an effort to ensure variability in the study sample. Although this study provided interesting insight into the experiences of Iraq and Afghanistan veterans, the study did not include veterans who have served in other wars or conflicts, or who are not currently enrolled in an institution of higher education. With these considerations in mind, the ability to generalize findings is limited to student-veterans of Iraq and Afghanistan. There could be significant differences among Iraq and Afghanistan veterans who choose to enroll in college as opposed to those veterans who do not enroll in college.

Another limitation to the proposed study is that the data collected was solely self-report. There is the possibility that study participants recalled inaccurate information or answered in a manner that is socially acceptable as opposed to a sincere and honest answer. While there is no reason to assume that study participants actively tried to deceive researchers regarding their experiences, participants may not feel like sharing particular details or events with the researchers which could have possibly influenced the findings of the study. Other concerns such as poor memory or emotional sensitivity surrounding an event may make it less likely for an event to be reported. Although collecting only self-report data one time may be limiting as opposed to collecting self-report data longitudinally over several points in time, these are relatively common considerations when including self-report measures in a study and do not limit the study in a manner that will likely be significant enough to warrant concern of the results of the data collected. In future studies, including successful participants who are not currently in college as well as non-military personnel who have served in Iraq or Afghanistan is recommended.

Recommendations for Future Research

Student-veterans have become a population of increasing research interest since the wars in Iraq and Afghanistan. Many members of the armed forces enroll in college upon discharge and bring their experiences and perspectives to the college campuses they attend. Student-veterans often have unique experiences that inform their perspective on life and new experiences. It is with considerations such as these that researchers have become interested in student-veterans as a population.

It is recommended that future researchers determine methods of ensuring that all student-veterans on each campus they contact are included in future study proposals. Ensuring a means of determining a response rate would help future researchers determine if the chosen method of data collection is the most efficient way of gathering study participants. Although it is likely that the response rate for the current study was very low, it would be beneficial to future researchers to know their response rate as a way of determining effectiveness of their participant recruitment strategies.

This study did not include veterans who attended college and graduated or left college before completing degree requirements. It would be interesting while providing a more thorough understanding of veterans in college if future studies included those who graduated as well as those who did not complete their college education. Unfortunately, due to the limited scope of this study, these are issues that could not be investigated during the course of the current study.

Implications for Practice

The findings of the current study have implications for practitioners as well as university administrators. Practicing psychologists such as those who are employed by the Veterans Health Administration (VHA) or other settings where they are likely to work with student-veterans can

gain valuable insight into the experiences of Iraq and Afghanistan veterans who are currently enrolled in college. These insights include a better understanding of how resilience, postdeployment social support, and combat experiences are related with well-being. Considerations of the importance of the role of each of these variables as well as strategies for increasing both social support and resilience are important to those who assist veterans.

College and university administrators can also benefit from the insights provided by the findings of this study. Student-veterans are a growing population on many college campuses , given the large number of veterans who have returned from Iraq and Afghanistan and enrolled in college. As student-veterans make their way to college campuses across the U.S., it is important that collegiate institutions understand the unique experiences and needs of student-veterans. The importance of providing resources such as campus veteran's officials as well as encouraging the development of student-veteran campus groups are better understood in the light of these results.

Conclusion

By investigating student veterans in college who have served in a combat zone, it is hoped that a clearer understanding of resilience, well-being, social support, and combat exposure will provide insight into the nature of successful transitions. Although many Iraq and Afghanistan veterans return from deployment with notable mental health and well-being concerns, many student-veterans successfully make the transition to college and civilian life without these problems even if they have experienced a lot of combat while on deployment. With such possible variation in responses to experiences in Iraq or Afghanistan, there are practical applications to the insights provided into the relationships between resilience, postdeployment social support, combat exposure, and well-being.

The present study contributes new knowledge and understanding into the experiences of student veterans, which can then contribute to a potentially more successful transition experience for those student veterans who have yet to enroll in college. It is hoped that understanding the contribution of the constructs under investigation to successful transition experiences will have a positive impact in the lives of current and future student veterans.

References

Adler, A. B., Britt, T. W., Castro, C. A., McGurk, D., & Bliese, P. D. (2011). Effect of transition home from combat on risk-taking and health-related behaviors. *Journal of Traumatic Stress,* 24(4), 381-389.

Adler, A. B., Huffman, A. H., Bliese, P. D., & Castro, C. A. (2005). The impact of deployment length and experience on the well-being of male and female soldiers. *Journal of Occupational Health Psychology,* 10(2), 121-137. doi: 10.1037/1076-8998.10.2.121

Agaibi, C. E. & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma Violence Abuse*, 6(3), 195-216. doi: 10.1177/1524838005277438

Alfred, G. C., Hammer, J. H., & Good, G. E. (2014). Male student veterans: Hardiness, psychological well-being, and masculine norms. *Psychology of Men and Masculinity,* 15(1), 95-99. doi: 10.1037/a0031450

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Blake, D., Weathers, F., Nagy, L., Kaloupek, D., Gusman, F. D., Charney, D. S., Keane, T. (1995). Development of a clinician-administered PTSD scale. *Journal of Traumatic Stress*, 8, 75-90.

Bobrow, J., Cook, E., Knowles, C., & Vieten, C. (2013). Coming all the way home: Integrative community care for those who serve. *Psychological Services,* 10(2), 137-144. doi: 10.1037/a0031279

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster: New York City in the aftermath of the September 11th terrorist attack. *Psychological Science,* 17(3), 181-186.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology,* 75(5), 671-682. doi: 10.1037/0022-006X.75.5.671

Bowman, N. A. (2010). The development of psychological well-being among first year college students. *Journal of College Student Development,* 51(2), 180-200. doi: 10.1353/csd.0.118

Burnett-Zeigler, I., Valenstein, M., Ilgen, M., Blow, A. J., Gorman, L. A., & Zivin, K. (2011). Civilian employment among recently returning Afghanistan and Iraq national guard veterans. *Military Medicine,* 176(6), 639-646.

Connor, K. M. & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18, 76-82.

Cox, D. W., Krieshok, T. K., Bjornsen, A. L., & Zumbo, B. D. (2015). Occupational engagement scale-student: Development and initial validation. *Journal of Career Assessment,* 23(1), 107-116. doi: 10.1177/1069072714523090

Creamer, M., Wade, D., Fletcher, S., & Forbes, D. (2011). PTSD among military personnel. *International Review of Psychiatry,* 23, 160-165. doi: 10.3109/09540261.559456

DeBeer, B. B., Kimbrel, N. A., Meyer, E. C., Gulliver, S. B., & Morissette, S. B. (2014). Combined PTSD and depressive symptoms interact with post-deployment social support to predict suicidal ideation in operation enduring freedom and operation Iraqi freedom veterans. *Psychiatry Research,* 216, 357-362. doi: 10.1016/j.psychres.2014.02.010

Demers, A. (2011). When veterans return: The role of community in reintegration. *Journal of Loss and Trauma,* 16, 160-179. doi: 10.1080/1532502412010519281

Elliott, M., Gonzalez, C., & Larsen, B. (2011). U.S. military veterans transition to college: Combat, PTSD, and alienation on campus. *Journal of Student Affairs Research and Practice,* 48, 279-296. doi: 10.2202/1949-6605.6293

Elsen, S. V., Schultz, M. R., Vogt, D., Glickman, M. E., Elwy, A. R., Drainoni, M. L., Osei-Bonsu, P. E., & Martin, J. (2012). Mental and physical health status and alcohol and drug use following return from deployment to Iraq or Afghanistan. *American Journal of Public Health*, 102(S1), S66-S73.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology,* 84, 377-389.

Escolas, S. M., Pitts, B. L., Safer, M. A., & Bartone, P. T. (2013). The protective value of hardiness on military posttraumatic stress symptoms. *Military Psychology,* 25(2), 116-123. doi: 10.1037/h0094953

Foa, E. B. & Meadows, E. A. (1997). Psychosocial treatments for posttraumatic stress disorder: A critical review. *Annu. Rev Psychol*., 48, 449-480.

Fontana, A. & Rosenheck, R. (2004). Trauma, change in strength of religious faith, and mental health service use among veterans treated for PTSD. *The Journal of Nervous and Mental Disease*, 192(9), 579-584. doi: 10.1097/01.nmd.0000138224.17375.55

Gates, M. A., Holowka, D. W., Vasterling, J. J., Keane, T. M., Marx, B. P., & Rosen, R. C. (2012). Posttraumatic stress disorder in veterans and military personnel: Epidemiology, screening, and case recognition. *Psychological Services*, 9(4), 361-381. doi: 10.1037/a0027649

Gould, M., Greenberg, N., & Hetherton, J. (2007). Stigma and the military: Evaluation of a PTSD psychoeducational program. *Journal of Traumatic Stress*, 20(4), 505-515.

Green, K. T., Calhoun, P. S., Dennis, M. F., & Beckham, J. C. (2010). Exploration of the resilience construct in posttraumatic stress disorder severity and functional correlates in military combat veterans who have served since September 11, 2001. *J Clin Psychiatry,* 71(7). 823-830.

Greenberg, N., Langston, V., & Gould, M. (2007). Culture: What is its effect on stress in the military? *Military Medicine*, 172(9), 931-935.

Greene-Shortridege, T. M., Britt, T. W., & Castro, C. A. (2007). The stigma of mental health problems in the military. *Military Medicine*, 172(2), 157-161.

Guay, S., Billette, V., & Marchand, A. (2006). Exploring the links between posttraumatic stress disorder and social support: Processes and potential research avenues. *Journal of Traumatic Stress,* 19(3), 327-338. doi: 10.1022/jts.20124

Guyker, W. M., Donnelly, K., Donnelly, J. P., Dunnam, M., Warner, G. C., Kittleson, J., …Meier, S. T. (2013). Dimensionality, reliability, and validity of the combat experiences scale. *Military Medicine,* 178(4), 377-384. doi: 10.7205/MILMED-D-12-00223

Hagenaars, M. A., Fisch, I., & van Minnen, A. (2011). The effect of trauma onset and frequency on PTSD-associated symptoms. *Journal of Affective Disorders*, 132, 192-199. doi: 10.1016/j.jad.2011.02.017

Hoge, C. W., Auchterlonie, J. L., & Milliken, C. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *JAMA*, 295(9), 1023-1032.

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England Journal of Medicine,* 351(1), 13-22.

James, L. M., Van Kampen, E., Miller, R. D., & Engdahl, B. E. (2013). Risk and protective factors associated with symptoms of post-traumatic stress, depression, and alcohol misses in OEF/OIF veterans. *Military Medicine,* 178(2), 159-165. doi: 10.7205/MILMED-D-12-00282

Jakupcak, M., Vannoy, S., Imel, Z., Cook, J. W., Fontana, A., Rosenheck, R., & McFall, M. (2010). Does PTSD moderate the relationship between social support and suicide risk in Iraq and Afghanistan war veterans seeking mental health treatment? *Depression and Anxiety,* 27, 1001-1005. doi: 10.1002/da.20722

Johnson, D. C, Polusny, M. A., Erbes, C. R., King, D., King, L., Litz, B. T., ... Southwick, S. M. (2011). Development and Initial Validation of the Response to Stressful Experiences Scale. *Military Medicine,* 176(2), 161-169.

Karlsen, E., Dybdahl, R., & Vitterso, J. The possible benefits of difficulty: How stress can increase and decrease subjective well-being. *Scandinavian Journal of Psychology,* 47, 411-417. doi: 10.1111/j.1467-9450.2006.00549.x

Kashdan, T. B., Julian, T., Merritt, K., & Uswatte, G. (2006). Social anxiety and posttraumatic stress in combat veterans: Relations to well-being and character strengths. *Behavior Research and Therapy,* 44, 561-583. doi: 10.1016/j.brat.2005.03.010

Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic eudaimonic well-being in Vietnam war veterans. *Behavior Research and Therapy,* 44, 177-199. doi: 10.1016/j.brat.2005.01.005

Keane, T. M., Caddell, J. M., & Taylor, K. L. (1988). Mississippi Scale for combat-related posttraumatic stress disorder: Three studies in reliability and validity. *Journal of Consulting and Clinical Psychology*, 56, 85-90.

Kim, P. Y., Britt, T. W., Klocko, R. P., Riviere, L. A., & Adler, A. B. (2011). Stigma, negative attitudes about treatment, and utilization of mental health care among soldiers. Military Psychology, 23, 65-81. doi: 10.1080/08995605.2011.534415

King, L. A., King, D. W., Vogt, D. S., Knight, J., & Samper, R. E. (2006). Deployment risk and resilience inventory: A collection of measures for studying deployment-related experiences of military personnel and veterans. *Military Psychology,* 18(2), 89-120.

Kline, A., Falca-Dodson, M., Sussner, B., Ciccone, D. S., Chandler, H., Callahan, L., & Losonczy, M. (2010). Effects of repeated deployment to Iraq and Afghanistan on the health of New Jersey Army National Guard troops: Implications for military readiness. *American Journal of Public Health*, 100(2), 276-283.

Laffaye, C., Cavella, S., Drescher, K., & Rosen, C. (2008). Relationships among PTSD symptoms, social support, and support source in veterans with chronic PTSD. *Journal of Traumatic Stress,* 21(4), 394-401. doi: 10.1002/jts.20348

Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality and Social Psychology,* 102(3), 592-615. doi: 10.1037/a0025948

MacGregor, A. J., Han, P. P., Dougherty, A. L., & Galarneau, M. R. (2012). Effect of dwell time on the mental health of US military personnel with multiple combat tours. *American Journal of Public Health*, 102(S1), S55-S59. doi: 10.2105/AJPH.2011.300341

Marmar, C. R. (2009). Mental health impact of Afghanistan and Iraq deployment: Meeting the challenge of a new generation of veterans. *Depression and Anxiety*, 26, 493-497. doi: 10.1002/da.20581

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology,* 82, 112-127.

Newcomb, M. D. (1990). Social support and personal characteristics: A developmental and interactional perspective. *Journal of Social and Clinical Psychology,* 9(1), 54-68. doi:

Osran, H. C., Smee, D. E., Sreenivasan, S., & Weinberger, L. E. (2010). Living outside the wire: Toward a transpersonal resilience approach for oif/oef veterans transitioning to civilian life. *The Journal of Transpersonal Psychology,* 42(2), 209-235.

Ozer, E. J., Best, S. R., Lipsey, T. L., Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin,* 129(1), 52-73. doi: 10.1037/0033-2909.129.1.52

Pietrzak, R. H., Johnson, D. C., Goldstein, M. B., Malley, J. C., Rivers, A. J., Morgan, C. A., & Southwick, S. M. (2010). Psychological buffers of traumatic stress, depressive symptoms, and psychosocial difficulties in veterans of operations enduring freedom and Iraqi freedom: The role of resilience, unit support, and post deployment social support. *Journal of Affective Disorders,* 120, 188-192. doi: 10.1016/j.jad.2009.04.015

Pietrzak, R. H. & Southwick, S. M. (2011). Psychological resilience in OEF-OIF veterans: Application of a novel classification approach and examination of demographic and psychosocial correlates. *Journal of Affective Disorders*, 133, 560-568. doi: 10.1016/j.jad.2011.04.028

Polusny, M. A., Erbes, C. R., Murdoch, M., Arbisi, P. A., Thuras, P., & Rath, M. B. (2011). Prospective risk factors for new-onset post-traumatic stress disorder in National Guard soldiers deployed to Iraq. *Psychological Medicine,* 41, 687-698. doi: 10.1017/S0033291710002047

Read, J. P., Colder, C. R., Merrill, J. E., Ouimette, P., White, J., & Swartout, A. (2012). Trauma and posttraumatic stress symptoms predict alcohol and other drug consequence trajectories in the first year of college. *Journal of Consulting and Clinical Psychology,* 80(3), 426-439. doi: 10.1037/a0028210

Richardson, L. K., Frueh, B. C., & Acierno, R. (2010). Prevalence estimates of combat-related post-traumatic stress disorder: Critical review. *Australian and New Zealand Journal of Psychiatry,* 44, 4-19.

Rumann, C. B. & Hamrick, F. A. (2010). Student veterans in transition: Re-enrolling after war zone deployments. *The Journal of Higher Education,* 81(4), 431-458.

Rumann, C., Rivera, M., & Hernandez, I. (2011). Student veterans and community colleges. *New Directions for Community Colleges,* 155, 51-58. doi: 10.1002/cc.457

Ryff, C. D. (1989a). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology,* 57(6), 1069-1081.

Ryff, C. D. (1989b). Beyond Ponce de Leon and life satisfaction: New directions in quest of successful ageing. *International Journal of Behavioral Development,* 12(1), 35-55.

Ryff, C. D. & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology,* 69(4), 719-727.

Sarason, I. G., Sarason, B. R., & Shearin, E. N. (1986). Social support as an individual difference variable: Its stability, origins, and relational aspects. *Journal of Personality and Social Psychology,* 50(4), 845-855.

Shackelford, A. L. (2009). Documenting the needs of student veterans with disabilities: Intersection roadblocks, solutions, and legal realities. *Journal of Postsecondary Education and Disability,* 22(1), 36-42.

Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, 59, 22-33.

Shen, Y. C., Arkes, J., Kwan, B. W., Tan, L. Y., & Williams, T. V. (2010). Effects of Iraq/Afghanistan deployments on PTSD diagnoses for still active personnel in all four services. *Military Medicine*, 175(10), 763-769

Smith, W. L., & Zhang, P. (2009). The academic ethic and the transition to college. *College Student Journal,* 43(1), 86-98.

Sundin, J., Fear, N. T., Iversen, A.,Rona, R. J., & Wessely, S. (2010). PTSD after deployment to Iraq: Conflicing rates, conflicting claims. *Psychological Medicine*, 40, 367-382. doi: 10.1017/S0033291709990791

Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder: A quantitative review of 25 years of research. *Psychological Bulletin*, 132(6), 959-992. doi: 10.1037/0033-2909.132.6.959

Tsai, J., Harpaz-Rotem, I., Pietrzak, R. H., & Southwick, S. M. (2012). The role of coping, resilience, and social support in mediating the relation between PTSD and social functioning in veterans returning from Iraq and Afghanistan. *Psychiatry,* 75(2), 135-149.

Vogt, D., Proctor, S. P., King, D. W., King, L. A., & Vasterling, J. J. (2008). Validation of scales from the deployment risk and resilience inventory in a sample of operation Iraqi freedom veterans. *Assessment,* 15, 391-403. doi: 10.1177/1073191108316030Whiteman, S. D., Barry, A. E., Mroczek, D. K., & MacDermid Wadsworth, S. (2013). The development and implications of peer emotional support for student service members/veterans and civilian college students. *Journal of Counseling Psychology,* 60(2), 265-278. doi: 10.1037/a0031650

Vogt, D., Smith, B. N., King, D. W., & King, L. A. (2012). Manual for the Deployment Risk and Resilience Inventory-2 (DRRI-2): A Collection of Measures for Studying Deployment-Related Experiences of Military Veterans. Boston, MA: National Center for PTSD.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS. *Journal of Personality and Social Psychology*, 54, 1063-1070.

Wilcox, S. (2010). Social relationships and PTSD symptomatology in combat veterans. *Psychological Trauma: Theory, Research, Practice, and Policy,* 2(3), 175-182. doi: 10.1037/a0019062

Wilkins, K. C., Lang, A. J., & Norman, S. B. (2011). Synthesis of the psychometric properties of the PTSD checklis (PCL) military, civilian, and specific versions. *Depress Anxiety*, 28(7), 596-606. doi: 10.1002/da.20837

Whiteman, S. D., Barry, A. E., Mroczek, D. K., & MacDermid Wadsworth, S. (2013). The development and implications of peer emotional support for student service members/veterans and civilian college students. *Journal of Counseling Psychology,* 60(2), 265-278. doi : 10.1037/a0031650

Wurster, K. G., Rinaldi, A. P., Woods, T. S., & Ming Liu, W. (2013). First-generation student veterans : Implications of poverty for psychotherapy. *Clinical Psychology : In Session,* 69, 127-137. doi : 10.1002/jclp.21952

Appendix A: Combat Experiences Scale

The statements below are about your combat experiences during your most recent deployment. As used in these statements, the term "unit" refers to those you lived and worked with on a daily basis during deployment. Please mark how often you experienced each circumstance.

While deployed…	Never	Once or twice	Several times over entire deployment	A few times each month	A few times each week	Daily or almost daily
1. ... I went on combat patrols or missions.	1	2	3	4	5	6
2. ...I took part in an assault on entrenched or fortified positions that involved naval and/or land forces.	1	2	3	4	5	6
3. ... I personally witnessed someone from my unit or an ally unit being seriously wounded or killed.	1	2	3	4	5	6
4. ... I encountered land or water mines, booby traps, or roadside bombs (for example, IEDs).	1	2	3	4	5	6
5. ... I was exposed to hostile	1	2	3	4	5	6

incoming fire.						
6. …I was exposed to 'friendly' incoming fire.	1	2	3	4	5	6
7. ... I was in a vehicle (for example, a "humvee", helicopter, or boat) or part of a convoy that was attacked.	1	2	3	4	5	6
8. …I was part of a land or naval artillery unit that fired on enemy combatants.	1	2	3	4	5	6
9. ... I personally witnessed enemy combatants being seriously wounded or killed.	1	2	3	4	5	6
10. ... I personally witnessed civilians (for example, women and children) being seriously wounded or killed.	1	2	3	4	5	6

11. ... I was injured in a combat-related incident.	1	2	3	4	5	6
12. …I fired my weapon at enemy combatants.	1	2	3	4	5	6
13. …I think I wounded or killed someone during combat operations.	1	2	3	4	5	6
14. …I was involved in locating or disarming explosive devices.	1	2	3	4	5	6
15. …I was involved in searching or clearing homes, buildings, or other locations.	1	2	3	4	5	6
16. …I participated in hand-to-hand combat.	1	2	3	4	5	6
17. …I was involved in searching and/or disarming potential enemy combatants.	1	2	3	4	5	6

Appendix B: Post Deployment Social Support Scale

The statements below refer to social support after deployment. Please indicate how much you agree or disagree with each statement.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. The reception I received when I returned from my deployment made me feel appreciated for my efforts.					
2. The American people made me feel at home when I returned.					
3. When I returned, people made me feel proud to have served my country in the Armed Forces.					
4. I am carefully listened to and understood by family members or friends.					
5. Among my family or relatives, there is someone who makes me feel better when I am feeling down.					
6. I have problems that I can't discuss with family or friends.					
7. Among my friends or relatives, there is someone I go to when I need advice.					

8. People at home just don't understand what I have been through in the Armed Forces.					
9. There are people to whom I can talk about my deployment experiences.					
10. The people I work with respect the fact that I am a veteran or service member.					
11. My supervisor understands when I need time to take off to take care of personal matters.					
12. My friends or relatives would lend me money if I needed it.					
13. My friends or relatives would help me move my belongings if I needed to.					
14. When I am unable to attend to daily chores, there is someone who will help me with these tasks.					
15. When I am ill, friends or family members will help out until I am well.					

Appendix C: Response to Stressful Experiences Scale

Resilience Scale

The following statements describe how some individuals may think, feel, or act during and after the most stressful events in life. Please indicate how well each of these statements describes you during and after life's most stressful events.

During and after life's most stressful events, I tend to...

During and after life's most stressful events, I tend to…	4 Exactly like me	3	2	1 Not at all like me
1. ...take action to fix things.	4	3	2	1
2. ...not give up trying to solve problems I think I can solve.	4	3	2	1
3. ...find a way to do what's necessary to carry on.	4	3	2	1
4. ...pray or meditate.	4	3	2	1
5. ...face my fears.	4	3	2	1
6. ...find opportunity for growth.	4	3	2	1
7. ...calm and comfort myself.	4	3	2	1
8. ...try to "recharge" myself before I	4	3	2	1

have to face the next challenge.				
9. ...see it as a challenge that will make me better.	4	3	2	1
10...look at the problem in a number of ways.	4	3	2	1
11. ...look for creative solutions to the problem.	4	3	2	1
12. ...put things in perspective and realize I will have times of joy and times of sadness.	4	3	2	1
13. ...be good at determining which situations are changeable and which are not.	4	3	2	1
14. ...find meaning from the experience.	4	3	2	1
15. ...find strength in the meaning, purpose, or mission of my life.	4	3	2	1
16. ...know I will bounce back.	4	3	2	1

17. ...expect that I can handle it.	4	3	2	1
18. ...learn important and useful life lessons.	4	3	2	1
19. ...understand that bad things can happen to anyone, not just me.	4	3	2	1
20. ...lean on my faith in God or a higher power.	4	3	2	1
21. ...draw upon lessons learned from failures and past mistakes.	4	3	2	1
22. ...practice ways to handle it better next time.	4	3	2	1

Appendix D: Ryff Scales of Well-Being

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. Most people see me as loving and affectionate	1	2	3	4	5	6
2. Sometimes I change the way I act or think to be more like those around me.	1	2	3	4	5	6
3. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
4. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
5. I feel good when I think of what I've done in the past and what I hope to do in the future.	1	2	3	4	5	6
6. When I look at the story of my life, I am pleased with how things have turned	1	2	3	4	5	6

out.						
7. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
8. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
9. The demands of everyday life often get me down.	1	2	3	4	5	6
10. In general, I feel that I continue to learn more about myself as time goes by.	1	2	3	4	5	6
11. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
12. In general, I feel confident and positive about myself.	1	2	3	4	5	6
13. I often feel lonely because I have few close friends	1	2	3	4	5	6

with whom to share my concerns.						
14. My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6
15. I do not fit very well with the people and the community around me.	1	2	3	4	5	6
16. I am the kind of person who likes to give new things a try.	1	2	3	4	5	6
17. I tend to focus on the present, because the future nearly always brings me problems.	1	2	3	4	5	6
18. I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6
19. I enjoy personal and mutual conversations with family members or friends.	1	2	3	4	5	6

20. I tend to worry about what other people think of me.	1	2	3	4	5	6
21. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
22. I don't want to try new ways of doing things - my life is fine the way it is.	1	2	3	4	5	6
23. I have a sense of direction and purpose in life.	1	2	3	4	5	6
24. Given the opportunity, there are many things about myself that I would change.	1	2	3	4	5	6
25. It is important to me to be a good listener when close friends talk to me about their problems.	1	2	3	4	5	6
26. Being happy with myself is more important to me than having others approve	1	2	3	4	5	6

of me.						
27. I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
28. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
29. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
30. I like most aspects of my personality.	1	2	3	4	5	6
31. I don't have many people who want to listen when I need to talk.	1	2	3	4	5	6
32. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
33. If I were unhappy with my living situation, I would take effective steps to change it.	1	2	3	4	5	6

34. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
35. I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6
36. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.	1	2	3	4	5	6
37. I feel like I get a lot out of my friendships.	1	2	3	4	5	6
38. People rarely talk to me into doing things I don't want to do.	1	2	3	4	5	6
39. I generally do a good job of taking care of my personal finances and affairs.	1	2	3	4	5	6
40. In my view, people of every age are able to continue growing and developing.	1	2	3	4	5	6

41. I used to set goals for myself, but that now seems like a waste of time.	1	2	3	4	5	6
42. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
43. It seems to me that most other people have more friends than I do.	1	2	3	4	5	6
44. It is more important to me to “fit in” with others than to stand alone on my principles.	1	2	3	4	5	6
45. I find it stressful that I can’t keep up with all of the things I have to do each day.	1	2	3	4	5	6
46. With time, I have gained a lot of insight about life that has made me a stronger, more capable person.	1	2	3	4	5	6
47. I enjoy making plans for the future and working to	1	2	3	4	5	6

make them a reality.						
48. For the most part, I am proud of who I am and the life I lead.	1	2	3	4	5	6
49. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
50. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
51. I am good at juggling my time so that I can fit everything in that needs to be done.	1	2	3	4	5	6
52. I have a sense that I have developed a lot as a person over time.	1	2	3	4	5	6
53. I am an active person in carrying out the plans I set for myself.	1	2	3	4	5	6
54. I envy many people for the lives	1	2	3	4	5	6

they lead.						
55. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
56. It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
57. My daily life is busy, but I derive a sense of satisfaction from keeping up with everything.	1	2	3	4	5	6
58. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6
59. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
60. My attitude about myself is probably not as positive as most people feel about	1	2	3	4	5	6

themselves.						
61. I often feel as if I'm on the outside looking in when it comes to friendships.	1	2	3	4	5	6
62. I often change my mind about decisions if my friends or family disagree.	1	2	3	4	5	6
63. I get frustrated when trying to plan my daily activities because I never accomplish the things I set out to do.	1	2	3	4	5	6
64. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
65. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
66. Many days I wake up feeling discouraged about how I have lived my	1	2	3	4	5	6

life.						
67. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
68. I am not the kind of person who gives in to social pressures to think or act in certain ways.	1	2	3	4	5	6
69. My efforts to find the kinds of activities and relationships that I need have been quite successful.	1	2	3	4	5	6
70. I enjoy seeing how my views have changed and matured over the years.	1	2	3	4	5	6
71. My aims in life have been more a source of satisfaction than frustration to me.	1	2	3	4	5	6
72. The past had its ups and downs, but in general, I wouldn't want to change it.	1	2	3	4	5	6

73. I find it difficult to really open up when I talk with others.	1	2	3	4	5	6
74. I am concerned about how other people evaluate the choices I have made in my life.	1	2	3	4	5	6
75. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
76. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
77. I find it satisfying to think about what I have accomplished in life.	1	2	3	4	5	6
78. When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6

79. My friends and I sympathize with each other's problems.	1	2	3	4	5	6
80. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
81. I have been able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
82. There is truth to the saying that you can't teach an old dog new tricks.	1	2	3	4	5	6
83. In the final analysis, I'm not so sure that my life adds up to much.	1	2	3	4	5	6
84. Everyone has their weaknesses, but I seem to have more than my share.	1	2	3	4	5	6

Appendix E: HSCL Approval Letter

May 26, 2015

Christopher Rea
crea@ku.edu

Dear Christopher Rea:

On 5/26/2015, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	The Relationship of Resilience, Social Support, and Combat History to Well-Being in Student Military Veterans
Investigator:	Christopher Rea
IRB ID:	STUDY00002495
Funding:	None
Grant ID:	None
Documents Reviewed:	• Information Statement Dissertation TRACK CHANGES.docx, • HSCL_New_Submission_Form_REA-revised.pdf, • Information Statement Dissertation CLEAN COPY.docx, • Debriefing for study entitled The Relationship of Resilience.docx, • Information Statement Dissertation.docx, • HSCL Point by Point Response.docx, • 14-item Questionnaire.doc, • resilience-assessment.pdf, • post-deployment-social-support.pdf, • Combat Experiences Scale, • OES-S,

The IRB approved the submission from 5/7/2015 to 5/6/2016.

1. Before 5/6/2016 submit a Continuing Review request and required attachments to request continuing approval or closure.
2. Any significant change to the protocol requires a modification approval prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
4. Any injury to a subject because of the research procedure must be reported immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

If continuing review approval is not granted before the expiration date of 5/6/2016 approval of this protocol expires on that date.

Please note university data security and handling requirements for your project:
https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm

You must use the final, watermarked version of the consent form, available under the "Documents" tab in eCompliance.

Sincerely,

Stephanie Dyson Elms, MPA
IRB Administrator, KU Lawrence Campus

APPENDIX F: Information Statement

Information Statement

The Department of Psychology and Research in Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand how well-being is related to resilience, social support, and combat history in college student military veterans. This will entail your completion of a survey. Your participation is expected to take approximately 30 minutes to complete. The content of the survey should cause no more discomfort than you would experience in your everyday life.

Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of resilience, post-deployment social support, and combat history, and their relationship to well-being in student military veterans. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. All information collected from participants will be assigned a three digit number that is not associated with the name or e-mail address of a participant.

**It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.*

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the survey indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,

Christopher P. Rea, M.S.
Principal Investigator
Psychology & Research in Education
University of Kansas
Lawrence, KS 66045
(785) 341-5812
crea@ku.edu

Barbara Kerr, Ph.D.
Faculty Supervisor
Psychology & Research in Education
University of Kansas
Lawrence, KS 66045
(785) 864-9762
bkerr@ku.edu